

REMARKS

In response to the Office Action mailed on June 24, 2003, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following remarks identifying improper rejections of certain pending claims, and have added new dependent claims for consideration.

Applicants have amended claims 9, and 22 to expedite prosecution of the present application. No new matter was added when amending the claims. The submission of these amendments should not be interpreted as acquiescing to the rejections.

Claims 1-26 were previously pending in this Application. Claim 21 is being cancelled by way of this amendment. Thus, after entry of this Amendment, claims 1-20 and 22-26 will be pending.

The following remarks address the rejections of claims 1-20 and 21-26 as set out in the present Office Action. Notably, patentability of claim 26 was not addressed by the Examiner.

Rejection of Claims 7, 9, 22, and 24 under 35 U.S.C. § 112

The Examiner has rejected claims 7, 9, 22 and 24 under 35 U.S.C. § 112 (paragraph 2) as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention.

Applicants have amended claim 9 in various particulars addressing the issue as noted by Examiner and are appreciative of Examiner's comments to place the claims in condition for allowance.

Applicants respectfully traverse the rejection of claims 7, 22 and 24. The Examiner contends that claim 1 implies that the request signal source is the originator of the data stream. Applicants agree with the Examiner that perhaps in one application the request signal source is the source generating "the data stream." However, the invention is not necessarily limited in this way. For example, in an embodiment as shown in FIG. 2 of the present application, routing mechanism 44 is a "request signal source" that transmits "a request signal" (e.g., request signal 46) to a remote network node (e.g., host computer 22) and also routes "the data stream" (e.g., data stream 54-1). Note that host agent 32 intercepts a message intended for the host computer. Thus, it is respectfully submitted that the host computer (e.g., host computer 22 as shown in FIG. 1) may be an originator of the data stream instead of the request signal source. The literal scope of claims 7, 22, and 24 are therefore not indefinite because they particularly point out and distinctly claim what Applicants view as embodiments of their invention. Applicants respectfully submit that the rejections should be withdrawn.

#### Rejections of Claims 1, 3, 9, and 21-23 under 35 U.S.C. § 102

The Examiner has rejected claims 1, 3, 9, and 21-23 under 35 U.S.C. § 102(e) based on the teachings of Cave, et al., (U.S. Patent 6,404,746).

It is well accepted that for a claim to be rendered obvious, at least its isolated components must be suggested by the prior art. More specifically, to establish a prima facie case of obviousness under 35 U.S.C. §103(a), all of the following criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally known to one of ordinary skill in the art, to modify the reference or to combine the teachings of the references. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to

combine the references and reasonable expectation of success must be found in the prior art, and not based on applicants' disclosure. In re Vaeck, 947 F.2d 488, 20USPQ2d 1438 (Fed.Cir. 1991). Accordingly, it is respectfully submitted that the invention as recited in amended claim 1 is neither anticipated nor obvious because it includes distinguishing limitations not taught or suggested by any of the cited references. In fact, even the combination of cited references does not teach every limitation of the claimed invention.

Indeed, the Cave reference is directed toward controlling a media stream. However, Cave does not disclose a technique of intercepting a request signal from a request signal source in which the request signal is intended for a host computer that would otherwise respond with control information as recited in claim 1.

To support the rejection of claim 1 and novelty of this claim limitation, the Office Action states that "the signal normally would go to the gateway 626 at the receiving end which would respond with control information (see figure 3 and columns 12 and 13)." Presumably, the Examiner likens the "request signal" in claim 1 to the electronic signal generated (in Cave) by telephone 618 attempting to connect with telephone 630. Apparently, the Examiner feels that the request signal from telephone 618 "would normally go to the gateway 626 at the receiving end." Applicants have reviewed the cited passage and figures in Cave and disagree with the Office Action's analysis of same. Rather than rely on this conclusory statement, Applicants would like to rely on the actual text of Cave and how it teaches to process a call based on a "request signal" from telephone 618. For example, Cave discloses a method of receiving an incoming call from telephone 618 at VRU 600 and specifically recites that:

"In order for telephone 618 to connect to VRU 600, telephone 618 must first connect to originating gateway 606 via PSTN 608, generally

using a G.711 data format ... Gateway 606 then packetizes the data and attaches the appropriate headers to the packets for transmission to packet VRU 600 across packet network 602." (Cave, column 12, lines 46-54)

Thus, a request signal (such as a call by a user at telephone 618) is not intended for a host computer that would otherwise respond with control information. Instead, as indicated by text in Cave, gateway 606 purposefully routes (based on packetized data and appropriate headers) a received call (presumably based on a dialed number) to VRU 600. VRU 600 accepts the call, and, in turn, generates control information to gateway 606 identifying how to maintain a data stream between telephone 618 and telephone 630.

Although not cited by the Examiner, the "call connect" technique is more specifically discussed with regard to FIG. 4a in Cave. Note this figure includes all of the same elements (e.g., gateways, gatekeeper, etc.) as FIG. 3. Regarding FIG. 4a, Cave specifically recites that:

"Originating gateway 810 receives the call from the PSTN, and queries 818 domain gatekeeper 808 via IP network 806 for the PSTN-number-to-IP address translation, which is sent back 818 to gateway 810 by gatekeeper 808. Originating gateway 810 then establishes H.323 call 820 to CCS 802 in VRU 800. Q.931 call signaling identifies the source and destination and establishes a virtual signal connection between gateway 810 and VRU 800." (Cave, column 14, lines 23)

The above passage recites a deliberate method for establishing connectivity between gateway 810 and VRU 800. In no way does VRU 810 or any other device in Cave intercept a request message originally intended node for another node. All of the messages are specifically sent to particular nodes based on a corresponding protocol to establish communications as discussed. Additionally,

and more significantly, no network node in Cave intercepts a request signal (e.g., originally intended for another node) that, in response, generates control signals for controlling a manner or transferring a data stream instead of the originally intended node. That is, the intercepting node provides control information instead of the originally intended node.

Consequently, the technique as recited in claim 1 is not taught or suggested by the cited prior art. If the rejection of claim 1 is to be maintained, Applicants respectfully request that it be pointed out with particularity where the cited prior art discloses a technique of intercepting a request signal and servicing it from other than an originally intended node. The Office Action purports a mode of operation in Cave in which gateway 606 communicates directly with gateway 626 to establish a call without the presence of VRU 600. If the Office Action's analysis were correct, the Cave reference would identify that gateway 626 could otherwise process a "request signal" for establishing a call. Such a mode is not supported by Cave. Thus, the Office Action uses Applicants' claim as a blueprint to reject the claimed invention. Note also in Figure 1 of Cave (and corresponding text in the Background of Cave) that connections (through PSTN 102) from telephone 106a and 106c each link directly to VRU 100 and thus there is no interception of a "request signal."

It should be noted that the Office Action has also not established a prima facie case of obviousness to properly reject claim 1. Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references, the knowledge of one of ordinary skill in the art, or in some cases, from the nature of the problem to be solved. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing of obviousness must be clear and particular. A bald assertion that certain elements as recited in a claimed invention are known in the art, without a further citation to prior art documents, or even a modicum of explanation, does not amount to proof

of obviousness. Without other evidence of a suggestion, teaching or motivation in the prior art, and simply taking the inventor's disclosure as a blueprint to defeat patentability is the essence of hindsight. Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 U.S.P.Q. 543, 547 (Fed.Cr. 1985). Mere conclusory statements are not sufficient to establish a genuine issue of material fact and are not evidence. McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 U.S.P.Q.2d 1129, 1131 (Fed.Cir. 1993) {as cited in In re Dembiczak, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed.Cir. 1999)}.

In contradistinction to the technique disclosed by Cave, claim 1 recites that a request signal originally intended for a host computer is intercepted and serviced from a node other than the originally intended node (i.e., a node other than the host computer). This alleviates the originally intended target node (e.g., host computer) from having to receive, process, and, thereafter generate a reply to the request signal. Thus, processing capability of the host computer is available for other tasks.

Moreover, control information is still provided to the request signal source in the event that the host computer malfunctions (e.g., becomes inoperable due to a failure). For example, the intercepting node provides control information instead of the host computer. Thus, it does not matter if the host computer fails because the request signal source may properly route the data stream (based upon control information from the intercepting node) even though the originally intended recipient of the request signal is non-functional. This advantage is not supported by Cave.

In addition to alleviating the originally intended host computer from having to respond, intercepting the request signal from an otherwise intended source reduces network traffic. For example, since the request signal is intercepted, it no longer needs to be forwarded by other nodes of the network to the originally

intended node. In addition to reducing network traffic and congestion, control information may be provided more quickly to the request signal source because the request signal and the corresponding reply path is shorted (e.g., reply signal need not travel along the excess path between the intercepting node and the originally intended host computer). Thus, a data stream may be more efficiently maintained at the request signal source.

For the reasons stated above, claim 1 is patentably distinct and advantageous over the cited prior art, and the rejection of claim 1 under 35 U.S.C. §102(e) should be withdrawn. Accordingly, allowance of claim 1 is respectfully requested.

Because claims 2-9 and 22-23 depend from and further limit claim 1, claims 2-9 and 22-23 are in allowable condition for the same reasons discussed for claim 1. Additionally, it should be noted that these dependent claims recite additional features which further patentably distinguish corresponding embodiments of the invention over the cited prior art.

In the rejection of claim 3, the Office Action states that "gateway 606 can directly communicate with gateway 626 without interception by the VRU (see figure 3)." This statement is correct to the extent that VRU 600 may redirect a data stream without passing through VRU 600. However, it is not related to the technique encompassed by claim 3. For example, claim 3 recites that the control signal is formed without communications to an otherwise intended host computer, not that the data stream may be formed directly between a corresponding source and recipient as cited by the Office Action. These further limitations as in claim 3 are advantageous for similar reasons discussed above.

In his rejection of claim 9, the Office Action states that "the signal from gateway 606 is received by the data processor and the data processor controls

the way the data is communicated to gateway 626 and thus acts on behalf of the way gateway 626 would have set up the communication itself.” It is respectfully submitted that this recited technique is not disclosed by Cave for the same reasons discussed above. More specifically, the Office Action is purporting a mode of operation in Cave in which gateway 606 communicates directly with gateway 626 without the presence of VRU 600. Such a mode is not supported by Cave. Thus, the Office Action uses Applicants’ claim as a blueprint to reject the claimed invention. Additionally, Applicants’ wish to point out that there is no mention in Cave regarding use of an agent whatsoever, nor is there any device that any type of agent intercepts a request signal (otherwise intended for a host computer) in which the intercepting node responds by generating the control signal. Use of an agent is advantageous because they are flexibly deployed at remote network nodes (potentially in the path of a request signal) and can be easily updated depending on appropriate routing policy information. This technique is not disclosed, taught, or suggested by Cave nor is it clear how he would implement such a technique even if he did recite use of an agent. A further explanation pointing to specific text in Cave regarding this technique is respectfully requested.

Claim 22 has been amended to properly recite that the request signal source is disposed at an intermediate node of a network to further distinguish the invention over the prior art. According to the Office Action, telephone 610 in FIG. 3 of Cave is likened to the request signal source in claim 22. It is respectfully submitted that telephone 610 is not disposed at an intermediate node. Rather, telephone 610 is disposed at an edge node of a communication network. Consequently, claim 22 is distinguished over Cave because it recites a request signal source at an intermediate node. Disposing the request signal source (e.g., a routing mechanism 46 in FIG. 2) at an intermediate node and providing control information from an intercepting node supports more efficient routing of data information through the request signal source. For example, in one application,



the request signal source may be a router generating a request signal to a host computer. Such a router may be situated deep within a network away from a host computer to which a request signal is sent. Intercepting the request signal reduces a time of detecting when control information has been requested by the request signal source.

Claim 21 has been cancelled. Hence, patentability is no longer an issue for this claim.

Rejections of Claims 2, 5, 6-8, 10-12, 14-20, 24 and 25 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 2, 5, 6-8, 10-12, 14-20 and 25 under 35 U.S.C. § 103(a) based on the teachings of Cave, et al., (U.S. Patent 6,404,746).

Claim 10 includes similar limitations (e.g., an agent process receives a request signal otherwise intended for the host computer) as recited in claim 1 above. For applicable reasons, claim 10 and corresponding dependent claims 11-18 and 24-26 are patentably distinct over the cited prior art.

Claim 19 includes similar limitations (e.g., an agent process receives a request signal otherwise intended for the host computer) as recited in claim 1 above. For applicable reasons, claim 19 and corresponding dependent claim 20 are patentably distinct over the cited prior art.

Applicants' would like to point out distinctions further cited by these dependent claims.

In his rejection of claim 2 (and claim 11), the Office Action states that "it would have been obvious to one skilled in the art at the time of the invention to include the gateway 606 within the VRU as a whole system because doing so would allow Cave to operate faster since the VRU would not have to

communicate over the packet network 62 (Internet) and experience delays.” It is respectfully submitted that this rejection is based on hindsight. As discussed above, it is submitted that VRU 600 does not intercept any request signals intended for other network nodes. Moreover, even if Cave operated in the manner as purported by the Office Action, the Office Action fails to address the technical hurdles associated with combining a VRU 600 such as a server with gateway 606 such as a bridge. The two devices are used to support entirely different functions and to combine them addresses no meaningful technical hurdle pertinent to Cave. Thus, the Office Action is again using Applicants’ claim as a blueprint to reject the invention. It is respectfully requested that the Examiner cite a prior art reference pointing out this combination of a VRU (e.g., a Voice Response Unit that handles incoming calls) with a gateway.

In his rejection of claim 6 (and claim 15), the Office Action states that “it would have been obvious to one skilled in the art at the time of the invention to perform such an operation in the system of Cave because avoiding the step of having to contact the viewer client would reduce network traffic and increase the available bandwidth, which can be used by other network nodes.” It is respectfully submitted that the rejection of claim 6 is also based on hindsight. First, claim 6 is directed toward potentially communicating with “the host computer” for assistance in responding to a request signal. The Office Action admits that Cave does not disclose an agent that performs an operation to decide whether to contact the host computer for assistance in response to receiving the request signal. Based on this observation by the Examiner, it is not clear how Cave suggests communicating with a host computer to assist in responding to a request signal. Second, the Cave reference would require substantial modification to support the system as suggested by the Examiner. Thus, the motivation cited by the Examiner for modifying the Cave reference must be based on Applicants’ disclosure and, more particularly, claim 6. As discussed above, to reject a claim based on obviousness, the evidence of a

teaching or suggestion must be clear and particular. Thus, it is respectfully requested that the Examiner point out specific language in Cave supporting this rejection. The technique encompassed by claim 6 it provides flexibility in generating control information in the event that the intercepting node does needs to communicate with the host computer. For example, the two nodes ( the intercepting node and host computer) may cooperate with each other to generate the control information.

In the rejection of claim 7 (and claim 16), the Office Action states that "it would have been obvious to one skilled in the art at the time of the invention to have the gateway 626 originate the data since doing so is merely a matter of design choice (the VRU could have worked with gateway 626 in transporting data to gateway 606 as a choice of design)." Applicants' would like to point out that the Office Action previously likened telephone 618 to "the request signal source" and VRU 600 to "the node intercepting the request signal". Claim 7 recites that data within the data stream identifies the host computer as an originator of the data stream. In other words, claim 7 encompasses the concept of intercepting a request signal (e.g., a request signal requesting control information) otherwise transmitted to the host computer transmitting the data stream. As mentioned, the Office Action likened gateway 606 to the request signal source. VRU 600 could not possibly intercept a request signal from gateway 606 originally intended for telephone 618 (analogized to be the host computer). Thus, it is not clear to Applicants' how the above statement is applicable to claim 7 nor why it would render claim 7 obvious in light of the cited art. It is respectfully requested that the Office Action specifically analogizes elements in the claim with analogous elements in any cited prior art reference or withdraw the rejection. The technique encompassed by claim 7 is advantageous because the host computer generating the data stream need not also provide control information how to maintain the data stream. As discussed, the intercepting node instead provides the control information.

The Office Action fails to render an opinion regarding patentability of claim 26. It is respectfully submitted that this technique encompassed by this claim is also uniquely patentable over the cited art. For example, claim 26 indicates that the request signal travels along a path exclusive of the data stream. According to FIG. 3 of Cave and the Office Action's previous analysis, "a request signal" from telephone 618 travels through gateway 606 and network 602 to VRU 600, which intercepts the request signal and sends generated control information back to gateway 606 through network 602. Consequently, the request signal in Cave travels along the same path as the data stream. In contradistinction, claim 26 indicates that the request signal travels along a path exclusive of the data stream. Thus, claim 26 encompasses an advantageous topology in which and host computer is orthogonal to a path associated with a flow of the data stream.

Rejections of Claims 4 and 13 under 35 U.S.C. § 102

The Examiner has cited Aharoni (U.S. Patent 6,014,694) in addition to Cave to reject claim 4 of the present application. Specifically, the technique of using RSVP (bandwidth reservation protocol) as in Aharoni was cited to reject the claimed invention.

As explained in the background of the present application invention and as used in Aharoni, RSVP techniques involves sending control information (such as bandwidth reservation information) from a host computer that is also either the source or recipient of an associated data stream. The host computer (source or recipient) of the data stream is burdened with generating and sending the control information in response to receiving the request signal.

Claim 4 is distinguished over Aharoni (and RSVP techniques). For example, as previously discussed, claim 4 recites that the request signal is intercepted and serviced by a node other than an originally intended recipient.

Aharoni discloses that a request signal is serviced from an originally intended recipient such as a host computer generating the data stream. Thus, according to the present invention, the host computer is alleviated from having to provide control instructions including RSVP instructions. Normally, RSVP instructions are provided by a host or recipient of a data stream. According to claim 4, RSVP instructions such as those to preserve bandwidth or provide quality of service are generated by a node other than originally intended. Neither Cave nor Aharoni teach or suggest this claim limitation. Allowance of claim 4 and 13 is therefore respectfully requested.

#### CONCLUSION

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after this Response, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicant(s) hereby petition(s) for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned Attorney at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,



Paul P. Kriz, Esq.  
Attorney for Applicant(s)  
Registration No.: 45, 7452  
CHAPIN & HUANG, L.L.C.  
Westborough Office Park  
1700 West Park Drive  
Westborough, Massachusetts 01581  
Telephone: (508) 366-9600  
Facsimile: (508) 616-9805  
Customer No. 022468

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